

AMENDMENTS TO THE CLAIMS

Before claim 1, change CLAIMS: to WE CLAIM:

Cancel claims 1-36 without prejudice or disclaimer of the subject matter therein and substitute new claims 37-72 therefor:

Claims 1-36 (cancelled)

37. (new) Pump (1), suitable for use as a vacuum pump or compressor, comprising: at least one pump piston (2, 3) moving on a circular path, and a pump housing (18), the pump piston (2, 3), optionally coupled in a rigid manner to one or more further pump pistons (2, 3), moving in an oscillating manner about an axis of rotation (5) on a path of movement correspondingly having two reversal positions; and furthermore a medium, optionally compressed or pressurized, being discharged via an outlet valve (8) and, in the course of movement from one reversal position into the other reversal position, an inlet valve (9) being opened; after which, in the course of a pressure buildup, the medium is discharged on a pressure side of the pump piston (2, 3) then obtained and taken in on a suction side of the pump piston (2, 3) then obtained.

38. (new) Pump according to claim 37, wherein the inlet valve (9) is run over in the movement from one reversal position into the other reversal position.

39. (new) Pump according to claim 37,
wherein a pump chamber is formed radially on the inside by an
inner wall formed rotationally fixed with respect to the pump
piston.

40. (new) Pump according to claim 39,
wherein a housing outer wall bounding the pump chamber radially
on the outside is formed in a fixed manner.

41. (new) Pump according to claim 39,
wherein a housing outer wall bounding the pump chamber radially
on the outside is movable.

42. (new) Pump according to claim 39,
wherein the inlet valve (9) is formed in at least one of the pump
chamber floor and/or in the pump chamber ceiling and/or in the
housing outer wall and/or in the housing dividing wall.

43. (new) Pump according to claim 39,
wherein the pump chamber is bounded in the direction of movement
of the pump piston (2, 3) by a fixed housing dividing wall.

44. (new) Pump according to claim 37,
wherein the outlet valve (8) is formed as a check valve.

45. (new) Pump according to claim 39,
wherein the outlet valve (8) is formed in at least one of the
housing dividing wall and/or in the pump chamber floor and/or in
the pump chamber ceiling and/or in the housing outer wall.

46. (new) Pump according to claim 37,
wherein the pump is driven by an electric motor.

47. (new) Pump according to claim 37,
wherein the pump is driven by a stepping motor.

48. (new) Pump according to claim 37,
wherein the pump is driven by an electromagnetic oscillating
part.

49. (new) Pump according to claim 37,
wherein a drive is performed by means of a crankshaft.

50. (new) Pump according to claim 37,
wherein the drive acts on two or more pumps linked by means of
the same crankshaft.

51. (new) Pump according to claim 50,
wherein, in the case of two pumps (1) driven by means of the same
crankshaft, they move in opposite directions.

52. (new) Pump according to claim 37,
wherein the inlet valve (9) and the outlet valve (8) are
associated with the same end region of the path of movement.

53. (new) Pump according to claim 37,
wherein the inlet valve (9) and the outlet valve (8) are disposed
in the same housing dividing wall (6, 7).

54. (new) Pump according to claim 37,
wherein the inlet valve (9) and/or the outlet valve (8) is formed
from a punched or bent sheet-metal part, with a closure plate
(27) associated with a valve opening (21, 22) and an adjoining
bending-out portion (28).

55. (new) Pump according to claim 54,
wherein the closure plate merges with a bending-out portion (28)
with the same diameter.

56. (new) Pump according to claim 54,
wherein the inlet valve (9) and/or the outlet valve (8) have

closure plates (27) and bending-out portions (28) merging with each other in a coplanar manner.

57. (new) Pump according to claim 37, wherein an inlet valve (9) and/or an outlet valve (8) has a mounting foot (29), which is mounted in a clamping manner.

58. (new) Pump according to claim 57, wherein the mounting foot (29) merges with a bending-out portion (28) in a coplanar manner.

59. (new) Pump according to claim 54, wherein the closure plate (27) rests on a support (31), which is mounted in a clamping manner between the valve and the associated housing part.

60. (new) Pump according to claim 59, wherein the mounting in a clamping manner is achieved by means of a clamping part (37).

61. (new) Pump according to claim 59, wherein the mounting in a clamping manner is achieved by means of a pressure part (35).

62. (new) Pump according to claim 37,
wherein a longitudinal extent of the inlet valve (9) and/or of
the outlet valve (8) runs parallel to the axis of rotation (5) of
the pump pistons (2, 3).

63. (new) Pump according to claim 37,
wherein a number of outlet valves (8) are disposed next to one
another parallel to the direction of rotation (5).

64. (new) Pump according to claim 37,
wherein the pump piston (2, 3) has associated with the outlet
valve (8) an opening projection (40), for the triggering of the
outlet valve (8).

65. (new) Pump according to claim 37,
wherein an opening projection, protruding toward a corresponding
end face of the pump piston (2, 3), is formed as a push rod.

66. (new) Pump according to claim 37,
wherein a pump (1) has four - or a higher multiple of two - pump
pistons (2, 3), of which two or more respectively move on a
common circular path.

67. (new) Pump according to claim 37,
wherein two pump pistons (2, 3) moving on a common circular path
are respectively disposed in a separate pump housing (18).

68. (new) Pump according to claim 37,
wherein a common drive is provided for the four pump pistons (2,
3), and in that the drive is disposed in a drive housing (44)
separate from the pump housing (18).

69. (new) Pump according to claim 68,
wherein the drive housing (44) is disposed between the pump
housings (18).

70. (new) Pump according to claim 37,
wherein in the case of a number of pump housings (18), the pump
housings (18) are identically formed such that they can be
exchanged for each other.

71. (new) Pump according to claim 37,
wherein the pump piston (2, 3) and/or the pump housing (18) is
coated in the surface area of an associated movement gap.

72. (new) Pump according to claim 71,
wherein the coating is a flocking.